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# Borough of Accrington.

## HEALTH DEPARTMENT.

# ANNUAL REPORT
OF THE
# MEDICAL OFFICER
FOR THE YEAR 1904.

**ARTHUR GREENHALGH,**
M.B., Ch.B., M.R.C.S., D.P.H.,
*Medical Officer of Health.*

ACCRINGTON
Jas. Broadley Ltd., Printers, "Gutenberg" Works.

# HEALTH COMMITTEE.

**From November, 1904, to November, 1905.**

Chairman : - - - Alderman T. BROUGHTON

Vice-Chairman : - Alderman T. CRONSHAW.

Committee :

THE MAYOR (Alderman W. H. RAWSON).

Councillor J. BRIGGS.
,, J. E. BUNTING.
,, J. R. CAMERON.
,, J. H. CRITCHLEY.
,, D. C. DEWHURST.
,, J. E. HAWORTH.
,, J. C. LUPTON.
,, W. LUPTON.
,, G. W. PICKUP.
,, J. WADDINGTON.
,, R. WALKER.
,, J. WHITTAKER.
,, W. WILSON.

Day of Meeting : Thursday, generally the third in the month, at 4-15 p.m.

# HEALTH DEPARTMENT.

Medical Officer of Health :

ARTHUR GREENHALGH, M.B., Ch.B., M.R.C.S., D.P.H.

Chief Sanitary Inspector :

RICHARD DIGGLE, Assoc. Royal San. Inst.

Assistant Sanitary Inspector :

JOHN E. CRAWSHAW.

Clerk :

WILLIAM HUNT.

Disinfector and Caretaker of Smallpox Hospital :

THOMAS RAWCLIFFE.

Foremen of Scavenging Departments :

WILLIAM HOWARD.

WILLIAM T. BIRTLES.

## *To the Sanitary Authority of the Borough of Accrington.*

GENTLEMEN,

I have the honour to submit for your consideration my Report on the Health and Sanitary condition of your Borough for the year ended December 31st, 1904.

Anyone who has patience to look through the various Tables contained in the body of the Report, will be able to judge very accurately as to the health conditions of the Borough. These Tables, arranged partly for the purpose of complying with the requirements of the Local Government Board, and partly designed by myself, show in the clearest possible manner the main factors relating to the sanitary condition of the Borough.

**As regards Deaths,** each one is placed in its own group, according to the cause certified, the age period at which it occurred, the Ward of the Borough where it took place, and whether male or female.

**The Births** are grouped according as they are male or female, legitimate or illegitimate, the month of the year, and the Ward in which they occurred.

It is interesting to note that the average birth-rates in the four Wards of the Borough for the four years 1901-2-3-4, are as nearly as possible equal.

**Diseases.** Under each separate disease which has been certified as the cause of death, is classified the number of males and females dying therefrom, their age periods, and the Ward of the Borough involved, so that it is at any time possible to take a particular disease and notice for years back the number of deaths resulting therefrom, not only in the Borough as a whole, but in each of the separate Wards.

**Infant Mortality.** This figure means the number of infants dying before the age of one year per one thousand births occurring during the same time. The table (page 16) in which this item is shown side by side with the birth-rates in the four Wards, is very instructive. Notice the unenviable position of North-West Ward, which in the average for the four years stands very much higher than any of the other Wards. This means either that the babies born in this Ward during the last four years have not been as vigorous and healthy as the children born in the other Wards or that the same amount of wisdom has not been exercised in their rearing.

**Infectious Diseases.** The notifiable infectious diseases are classified and shown for comparison for years back. The number of deaths and the number of cases notified in each Ward being clearly shown.

**Collection and Destruction of Refuse.** The large table in the Sanitary Inspector's portion of the Report is a compendium of nearly all that requires to be known about this Department of the Council's work, and argues well for the efficiency of the Sanitary Inspector himself.

The beginning of the year found the Borough in the midst of an epidemic of Measles, which commenced in the autumn of the previous year ; it resulted in 25 deaths this year, and 35 in the year before.

Whooping Cough has also been very prevalent, and was certified as the cause of 14 deaths.

Small-pox for the third year in succession has been present to the extent of four cases, all of whom recovered.

During the last two months of the year there was a very extensive epidemic of Influenza of a not very severe type, so that although a very great number of persons were afflicted the fatality was fortunately very light.

No marked change has been made in the staff of the Health Department, and just as it has been my pleasure in previous years, I have again nothing but good to say of the efficiency and industry of each one.

Mr. Diggle is too well known to the members of the Council to require any words from me.

Mr. Rawcliffe during the time that he has not been quarantined in the Isolation Hospital, has performed his duties in the office as Disinfector and Fever Visitor to my entire satisfaction ; the care which he and his wife have always bestowed upon the Isolation Hospital and all its contents is worthy of the greatest praise, it is always clean and tidy, the beds and bedding kept carefully aired, and everything ready at the shortest notice for use when required.

Up to the present time they have been quarantined for about 20 weeks, during which time they have unaided, nursed for me the last 12 cases of Small-pox we have had in the Borough, three of which have been of the most severe type, requiring constant attention day and night during the height of their fever. Their painstaking care for the comfort, cleanliness, and food of the patients has earned the gratitude of every one, and will no doubt receive suitable acknowledgment at the hands of the Health Committee.

To the Town Clerk and the Chairman and Members of the Health Committee, I am indebted for many kindnesses during the year.

I have the honour to be, Gentlemen,

Your obedient Servant,

ARTHUR GREENHALGH.

**Population.**

The statistics contained in this Report are based upon a population of 44,300 which I estimate would be the population of the Borough at the middle of the year 1904.

A copy of the Census returns of 1901 appear below.

| LOCALITY. | HOUSES. | | | | POPULATION. | | |
|---|---|---|---|---|---|---|---|
| | | Un-inhabited. | | | | | |
| | In-habited. | Not in Occu-pation. | In Occu-pation. | Build-ing. | Persons. | Males. | Fe-males. |
| North-East Ward .. | 2456 | 150 | 29 | 71 | 11001 | 5190 | 5811 |
| South-East Ward .. | 1736 | 93 | 42 | 9 | 7858 | 3789 | 4069 |
| South-West Ward.. | 2983 | 123 | 49 | 25 | 13346 | 6312 | 7034 |
| North-West Ward.. | 2340 | 85 | 30 | 63 | 10917 | 5237 | 5680 |
| Accrington.... | 9515 | 451 | 150 | 168 | 43122 | 20528 | 22594 |

| | |
|---|---|
| Population in Census year 1881 ................ | 31,435 |
| ,, ,, 1891 ................ | 38,603 |
| ,, ,, 1901 ................ | 43,122 |
| Increase of population in the ten years 1881–1891 .. | 7,168 |
| ,, ,, ,, 1891–1901 .. | 4,519 |
| Number of occupied houses in 1881 ............ | 6,396 |
| ,, ,, 1891.............. | 8,155 |
| ,, ,, 1901.............. | 9,515 |
| Number of new houses certified ready for occupation during 1903 ........................ | 132 |
| ,, ,, during 1904 .................... | 47 |
| Average number of persons in each house in 1881 .. | 4·9 |
| ,, ,, ,, ,, 1891 .. | 4·7 |
| ,, ,, ,, ,, 1901 .. | 4·5 |
| Estimated population to middle of year 1903.... | 44,000 |
| ,, ,, ,, ,, 1904.... | 44,300 |

The following table shows the number of new houses certified as fit for occupation during the 13 years 1891-1904, arranged according to the Wards in which they are situated.

| YEAR | North-West Ward. | South-West Ward. | North-East Ward. | South-East Ward. | TOTAL. |
|---|---|---|---|---|---|
| 1891 | 32 | 77 | 33 | 12 | 154 |
| 1892 | 29 | 104 | 40 | 25 | 198 |
| 1893 | 45 | 48 | 36 | 4 | 133 |
| 1894 | 36 | 57 | 25 | 2 | 120 |
| 1895 | 27 | 12 | 47 | 4 | 90 |
| 1896 | 60 | 30 | 17 | 6 | 113 |
| 1897 | 54 | 31 | 17 | 13 | 115 |
| 1898 | 67 | 98 | 67 | 4 | 236 |
| 1899 | 51 | 96 | 38 | 9 | 194 |
| 1900 | 90 | 90 | 41 | 16 | 237 |
| 1901 | 101 | 39 | 75 | 15 | 230 |
| 1902 | 97 | 41 | 65 | 12 | 215 |
| 1903 | 32 | 52 | 30 | 18 | 132 |
| 1904 | 12 | 5 | 23 | 7 | 47 |
| Total.. | 733 | 780 | 554 | 147 | 2,214 |

**Area.**—The area of the Borough, according to the last Ordnance Survey, is 3,426.6 acres, giving a density of 12.9 persons to the acre. The urban portion of the Borough has a considerably higher density than this, but cannot be estimated with accuracy.

**Altitudes.**—Altitudes at centre of Town and Boundaries.

| | Feet above Sea Level. |
|---|---|
| Town Hall : Ordnance Bench Mark ........ | 441.60 |
| Centre of Street opposite ...... | 439.00 |
| Boundaries at :— | |
| Blackburn Road (adjoining Church) :— | |
| Bench Mark on Boundary Stone .... | 413.00 |
| Centre of Road opposite............ | 412.19 |
| Whalley Road (adjoining Clayton) :— | |
| Bench Mark on Boundary Stone...... | 515.00 |
| Centre of Road opposite............ | 513.80 |
| Burnley Road (adjoining Huncoat) :— | |
| Bench Mark on Boundary Stone...... | 563.00 |
| Centre of Road opposite............ | 562.04 |
| Manchester Road (adjoining Baxenden) :— | |
| Bench Mark on Boundary Stone...... | 757.00 |
| Centre of Road opposite............ | 755.90 |

Datum : Mean High Water Mark at Liverpool.

**Occupations.**—The occupations of the people are of a varied character. The staple industries are cotton weaving, cotton spinning, the manufacture of cotton spinning machinery, calico printing, and coal mining. Brick-making is an industry carried on at several places on the outskirts of the Borough.

A large proportion of the female portion of the population finds employment in the cotton mills of the town.

**Deaths.**—667 deaths, 330 males and 337 females, have been registered in the Borough during the year, giving a crude death-rate equal to 15.05 per 1,000 of the estimated population per annum.

7 deaths were " uncertified " either by the Coroner or by a registered medical practitioner, 3 males, 4 females ; 24 deaths, 15 males and 9 females, have been certified by the Coroner.

**Death-Rate Corrected.**—The total deaths appertaining to the Borough are as follows :—

| | | |
|---|---|---|
| Deaths occurring in Borough (excluding 18 in the Victoria Hospital, and excluding 2 deaths of non-residents in Lydia and Steiner Streets).. | | 647 |
| Deaths in Victoria Hospital................ | 18 | |
| Less deaths of persons in Hospital residing outside the Borough (non-residents).... | 5 | |
| Deaths of Accrington residents in Hospital.. | — | 13 |
| Deaths of Accrington residents occurring outside the Borough, viz. :— | | |
| Haslingden Union Workhouse, Pike Law.. | 33 | |
| Halifax ........................... | 1 | |
| Blackburn ......................... | 2 | |
| Manchester ........................ | 3 | |
| | — | 39 |
| | | 699 |

giving a corrected death-rate of 15.77 per 1,000 per annum.

By the term "non-residents" is meant persons brought into the district on account of illness and dying there, and by the term "residents" is meant persons who have been taken out of the district on account of illness, and have died elsewhere.

Before the year 1900, the deaths of Accrington residents occurring in the Haslingden Union Workhouse were not taken into consideration in calculating the annual death-rates of the Borough. The Local Government Board, however, desired this to be done, consequently, in calculating the death-rate for the present year, 33 deaths have had to be included which, under previous arrangements, would have been neglected.

Crude annual death-rate per 1,000 ............ 15.05
Corrected ,, ,, (including 39 deaths outside the Borough, and excluding 5 non-residents at the Victoria Hospital, and 2 others) ........................ 15.77

Births :—Males ......................... 524
Females ....................... 479
—— 1003

Deaths .............................. 699
——

Excess of births over deaths ............ 304

Deaths of infants under 1 year of age.......... 149
giving an infant mortality per 1,000 births of .. 148.55

The following table gives the recorded death-rate for the last 26 years :—

| Year. | Mortality per 1,000. | Year. | Mortality per 1,000. |
|---|---|---|---|
| 1879 | 21.07 | 1892 | 17.35 |
| 1880 | 19.22 | 1893 | 17.24 |
| 1881 | 17.65 | 1894 | 12.98 |
| 1882 | 22.26 | 1895 | 17.82 |
| 1883 | 19.24 | 1896 | 15.54 |
| 1884 | 19.30 | 1897 | 16.78 |
| 1885 | 16.80 | 1898 | 15.35 |
| 1886 | 17.40 | 1899 | 14.61 |
| 1887 | 17.70 | 1900 | 15.23 corrected |
| 1888 | 16.70 | 1901 | 16.33 corrected |
| 1889 | 20.20 | 1902 | 13.74 corrected |
| 1890 | 16.60 | 1903 | 14.70 corrected |
| 1891 | 20.20 | 1904 | 15.77 corrected |

The following table shows the seasonal distribution of deaths, including deaths of 39 Accrington "residents" occurring at Pike Law, etc., and excluding 5 deaths of "non-residents" in Victoria Hospital, and 2 others occurring in Lydia Street and Steiner Street.

| MONTH. | MALES. | FEMALES. | TOTAL. |
|---|---|---|---|
| January ........ | 44 | 44 | 88 |
| February ...... | 39 | 35 | 74 |
| March .......... | 39 | 34 | 73 |
| April .......... | 30 | 29 | 59 |
| May .......... | 35 | 22 | 57 |
| June .......... | 22 | 20 | 42 |
| July .......... | 8 | 17 | 25 |
| August ........ | 27 | 24 | 51 |
| September ...... | 30 | 28 | 58 |
| October ........ | 23 | 29 | 52 |
| November ...... | 27 | 27 | 54 |
| December ...... | 31 | 35 | 66 |
|  | 355 | 344 | 699 |

**Births.**—1003 births—524 males, 479 females—have been registered, giving a birth-rate equal to 22.64 per 1,000 per annum.

**Births Table.** This table shows the seasonable distribution of the Births in the four Wards, together with the birth-rates per thousand persons living in the Wards, and the infant mortalities of the Wards for the year.

# SUMMARY OF DEATHS.—TABLE VII.

| | Total. | 0 to 1 | 1 to 2 | 2 to 3 | 3 to 4 | 4 to 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 to 55 | 55 to 65 | 65 to 70 | 70 to 80 | 80 and up | North-West. | | South-West. | | North-East. | | South-East. | | Rate per 10,000. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | M | F | M | F | M | F | M | F | North-West. | South West. | North-East. | South-East. |
| General Diseases :— | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zymotic Diseases | 65 | 19 | 22 | 7 | 4 | 1 | 2 | .. | 2 | 1 | 1 | .. | 1 | .. | 2 | 2 | .. | 1 | .. | .. | 7 | 4 | 11 | 6 | 9 | 13 | 12 | 3 | 9.8 | 12.3 | 19.4 | 18.5 |
| Tubercular Diseases | 72 | 4 | .. | .. | .. | 1 | 3 | 3 | 9 | 4 | 6 | 10 | 5 | 5 | 8 | 7 | 7 | .. | .. | .. | 14 | 8 | 11 | 6 | 10 | 8 | 10 | 5 | 19.6 | 12.3 | 15.9 | 18.5 |
| Other General Diseases | 167 | 65 | 4 | .. | .. | .. | 2 | 1 | 1 | 1 | 6 | 3 | 2 | 8 | 7 | 7 | 16 | 4 | 20 | 20 | 28 | 20 | 21 | 23 | 25 | 22 | 15 | 13 | 42.9 | 31.9 | 41.6 | 34.6 |
| Diseases of Nervous System | 23 | 6 | 1 | .. | 2 | 2 | .. | 1 | 2 | .. | .. | .. | .. | .. | 1 | 4 | 1 | 2 | 1 | .. | 4 | 4 | 2 | 5 | 3 | 2 | .. | 3 | 7.1 | 5.0 | 4.4 | 3.7 |
| ,, Organs of Special Sense | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .8 | .. | .8 | .. |
| ,, Heart | 46 | .. | 1 | .. | .. | .. | 1 | .. | 2 | 1 | 1 | 4 | 4 | 4 | 2 | 4 | 9 | 6 | 7 | .. | 5 | 3 | 4 | 7 | 4 | 9 | 5 | 9 | 7.1 | 8.0 | 11.5 | 17.3 |
| ,, Blood Vessels | 57 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 9 | 19 | 10 | 14 | 3 | 8 | 2 | 4 | 13 | 8 | 9 | 7 | 6 | 8.9 | 12.3 | 15.0 | 16.0 |
| ,, Respiratory Organs | 156 | 30 | 12 | 6 | 2 | .. | 3 | 2 | 2 | 3 | 2 | 4 | 4 | 6 | 8 | 9 | 19 | 14 | 27 | 3 | 19 | 23 | 20 | 30 | 17 | 16 | 13 | 18 | 37.5 | 36.3 | 29.2 | 38.3 |
| ,, Digestive System | 43 | 17 | 3 | .. | .. | .. | 1 | .. | .. | 2 | 2 | 1 | .. | 4 | 3 | .. | 7 | 2 | 1 | .. | 6 | 9 | 5 | 7 | 7 | 7 | 2 | .. | 13.4 | 8.7 | 12.4 | 2.4 |
| Lymph, etc., Diseases | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | .. | .. | .. | .. | 1 | .. | 2 | 1 | .. | .. | .7 | 1.7 | 1.2 |
| Diseases of Urinary System | 26 | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 6 | 3 | 4 | 1 | 4 | 1 | 7 | .. | 3 | 6 | 4 | 1 | 4.4 | 5.0 | 8.0 | 6.1 |
| ,, Generative System | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | .. | 1.4 | .. | 1.2 |
| Accidents of Child-birth | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | 1 | .. | 1 | .8 | 1.4 | .8 | 1.2 |
| Joint Disease | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .8 | .. | .. | .. |
| Ulceration | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .8 | .. | .. | .. |
| Accidents and Negligence | 9 | 1 | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | 1 | .. | 2 | .. | 1 | .. | .. | 1 | .. | 2 | 3 | .. | 2 | 1 | 1 | .. | 1.7 | 2.1 | 2.6 | 1.2 |
| Suicides | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | 1.7 | .. |
| Manslaughter | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1.2 |
| Murder | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .8 | .. | .. | .. |
| Ill-defined | 15 | 4 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 3 | 1 | 1 | .. | 1 | 3 | .. | 4 | .. | 3 | 3 | .. | 2 | 2.6 | 2.9 | 4.3 | 2.4 |
| | 699 | 149 | 44 | 13 | 8 | 5 | 12 | 10 | 19 | 14 | 21 | 26 | 22 | 31 | 39 | 48 | 89 | 43 | 77 | 29 | 99 | 80 | 92 | 102 | 93 | 100 | 71 | 62 | 160.1 | 141.0 | 171.0 | 164.5 |

Zymotic Diseases include Measles, Scarlet Fever, Whooping Cough, Diphtheria, Enteric Fever, Zymotic Enteritis, and Erysipelas.

The most noticeable feature in this table is the abnormally high infant mortality of North-West Ward.

The table showing the classification of the causes of death of these infants indicates that Diarrhæa, Enteritis, Marasmus, and Congenital Defects were more common in this Ward than in the others. This list would indicate that improper feeding is at the root of the mischief, whether the system of nursing out is more prevalent in this Ward than the others I have no figures to show. It is only fair to state that the average infant mortality for the three years 1901–2–3 shows South-East Ward in a worse position than North-West.

With the exception of last year the birth-rate is the lowest on record, being very little more than half what it was twenty years ago ; this decrease in the birth-rate is general throughout the country; a table at the end of the Report shows the birth-rates in several of the towns of similar size.

The following Table shows a comparison of the Birth-rates and Infant Mortalities of the whole Borough, and of the Wards separately, together with an average, for the last four years.

| YEAR. | ACCRINGTON. | | North-West Ward. | | South-West Ward. | | North-East Ward. | | South-East Ward. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Birth-rate. | Infant M'tality. | Birth-rate. | Infant M'tality. | Birth-rate. | Infant M'tality. | Birth-rate. | Infant M'tality. | Birth-rate. | Infant M'tality. |
| 1901.... | 24.84 | 159.21 | 24.49 | 164.17 | 23.54 | 133.33 | 24.93 | 185.44 | 27.42 | 157.40 |
| 1902.... | 23.58 | 130.60 | 23.16 | 125.49 | 23.31 | 127.38 | 23.42 | 115.38 | 24.85 | 162.43 |
| 1903.... | 21.95 | 130.43 | 21.77 | 157.02 | 22.86 | 125.00 | 21.75 | 106.55 | 20.93 | 136.90 |
| 1904.... | 22.64 | 148.55 | 23.26 | 176.92 | 22.97 | 139.24 | 22.86 | 147.28 | 20.90 | 124.26 |
| Average.. | 23.24 | 142.54 | 23.16 | 156.09 | 23.17 | 131.26 | 23.23 | 143.68 | 23.50 | 146.66 |

The birth-rate per 1,000 living, at all ages, for the last 23 years is shown below :—

| Year. | Birth Rate. | Year. | Birth Rate. |
|---|---|---|---|
| 1882 | 37.4 | 1893 | 28.8 |
| 1883 | 33.7 | 1894 | 27.8 |
| 1884 | 43.4 | 1895 | 27.0 |
| 1885 | 32.7 | 1896 | 27.1 |
| 1886 | 29.2 | 1897 | 24.97 |
| 1887 | 30.5 | 1898 | 23.98 |
| 1888 | 31.5 | 1899 | 23.25 |
| 1889 | 28.3 | 1900 | 24.67 |
| 1890 | 27.1 | 1901 | 24.84 |
| 1891 | 30.6 | 1902 | 23.58 |
| 1892 | 28.6 | 1903 | 21.95 |
| | | 1904 | 22.64 |

**Natural Increase of Population.**—The excess of births over deaths is 304. The corresponding figures for the last thirteen years are :—

| | |
|---|---|
| 1892 | 438 |
| 1893 | 456 |
| 1894 | 525 |
| 1895 | 380 |
| 1896 | 485 |
| 1897 | 348 |
| 1898 | 372 |
| 1899 | 382 |
| 1900 | 426 |
| 1901 | 368 |
| 1902 | 428 |
| 1903 | 319 |
| 1904 | 304 |

## BIRTHS REGISTERED, 1904.

| 1904 | North-West Ward | | | | South-West Ward | | | | North-East Ward | | | | South-East Ward | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MONTH. | Legitimate | | Illegitimate | | Legitimate | | Illegitimate | | Legitimate | | Illegitimate | | Legitimate | | Illegitimate | |
| | M | F | M | F | M | F | M | F | M | F | M | F | M | F | M | F |
| January .... | 13 | 12 | .. | 1 | 7 | 14 | .. | .. | 14 | 9 | 1 | 1 | 4 | 4 | 1 | .. |
| February .. | 7 | 14 | .. | .. | 15 | 19 | .. | .. | 13 | 8 | .. | 1 | 10 | 8 | .. | .. |
| March ...... | 14 | 8 | 1 | .. | 10 | 9 | .. | .. | 10 | 10 | 1 | 1 | 6 | 6 | .. | .. |
| April ...... | 15 | 14 | .. | .. | 11 | 14 | .. | 1 | 11 | 8 | .. | 1 | 10 | 4 | 1 | 2 |
| May ...... | 10 | 8 | 1 | .. | 16 | 10 | .. | 1 | 9 | 8 | .. | 1 | 10 | 8 | 1 | .. |
| June ...... | 9 | 8 | 1 | .. | 14 | 20 | .. | 2 | 11 | 9 | 1 | 1 | 6 | 8 | 2 | 1 |
| July ...... | 7 | 10 | 1 | .. | 16 | 12 | 1 | .. | 8 | 7 | .. | 1 | 7 | 7 | 1 | .. |
| August .... | 14 | 17 | .. | .. | 21 | 9 | .. | .. | 10 | 9 | .. | .. | 13 | 8 | .. | 2 |
| September .. | 11 | 9 | .. | .. | 9 | 7 | 1 | .. | 15 | 13 | .. | .. | 8 | 6 | .. | .. |
| October .... | 14 | 10 | .. | 2 | 15 | 8 | .. | .. | 8 | 14 | 1 | .. | 4 | 6 | .. | .. |
| November .. | 8 | 5 | 1 | .. | 15 | 11 | .. | .. | 11 | 7 | .. | 1 | 2 | 6 | .. | .. |
| December .. | 7 | 8 | .. | .. | 12 | 14 | .. | 2 | 11 | 13 | .. | .. | 6 | 1 | .. | .. |
| | 129 | 123 | 5 | 3 | 161 | 147 | 2 | 6 | 131 | 115 | 4 | 8 | 86 | 72 | 6 | 5 |

| | North-West Ward | | South-West Ward | | North-East Ward | | South-East Ward |
|---|---|---|---|---|---|---|---|
| Total Births .... | 260 | .. | 316 | .. | 258 | .. | 169 |
| Birth-rate ........ | 23.26 | .. | 22.97 | .. | 22.86 | .. | 20.90 |
| Infant Mortality .. | 176.92 | .. | 139.24 | .. | 147.28 | .. | 124.26 |

**Infant Mortality.** During the last few years the subject of infant mortality has engaged a great deal of public attention, and it is comforting to note that there has been a decided reduction in this particular item of mortality, but yet there is room for a very much greater improvement. The proper care of an infant is undoubtedly a difficult matter to carry out in many households, partly from lack of knowledge and greatly from lack of means and disposition. There is unfortunately, in many mothers' minds, a great dread of taking their young infants out into the fresh air and the all too small amount of sunshine we are favoured with. It used to be not an uncommon boast among many of the old-time mothers that such and such a child was not allowed to see the daylight until it was several months old, and this pernicious doctrine dies a very slow death, and unfortunately is the means of sending to their graves many infants who would otherwise grow up to enjoy life. A better text to follow in this particular of the treatment of infants would be to say that " If the weather was fit to turn a dog out it was fit to take the baby out properly protected." If some means could be devised to give the young children more frequent and regular tastes of the fresh air and sunshine, I am very sure that a very considerable reduction in the infant mortality would result at once. At present great numbers of them are slept throughout the night in the same beds as their parents instead of being given a cot to themselves, and during the day the mother or nurse has so many other things to look after that she cannot find time to carry the child out into the open air.

The certified causes of death of many of these infants show that in many cases the child is born into the world immature, and is otherwise ill-fitted to fight the battle of life, indicating that the mother has not had that great care which her condition requires.

The following table explains itself and shows the **causes** of death in each case :—

| DISEASES. | Total. | North-West Ward. | | South-West Ward. | | North-East Ward. | | South-East Ward. | |
|---|---|---|---|---|---|---|---|---|---|
| | | M | F | M | F | M | F | M | F |
| Measles | 4 | .. | .. | .. | 1 | 1 | .. | 2 | .. |
| Whooping Cough | 6 | 2 | .. | 1 | 2 | 1 | .. | .. | .. |
| Zymotic Enteritis | 9 | 1 | .. | 3 | .. | 1 | 4 | .. | .. |
| Diarrhæa | 5 | 1 | 1 | .. | .. | 3 | .. | .. | .. |
| Tuberculosis of Meninges | 2 | .. | .. | 1 | .. | .. | 1 | .. | .. |
| ,, Peritoneum | 2 | .. | .. | .. | .. | .. | .. | 2 | .. |
| Rachitis | 1 | 1 | .. | .. | .. | .. | .. | .. | .. |
| Anæmia | 1 | .. | .. | 1 | .. | .. | .. | .. | .. |
| Premature Birth | 17 | 2 | 2 | 1 | 6 | 4 | .. | 2 | .. |
| Congenital Defects | 18 | 4 | 2 | 3 | 2 | 4 | 1 | 1 | 1 |
| Atelectasis | 2 | .. | 1 | 1 | .. | .. | .. | .. | .. |
| Want of Breast Milk | 1 | .. | .. | .. | .. | 1 | .. | .. | .. |
| Marasmus | 12 | 7 | 1 | 2 | .. | 1 | .. | 1 | .. |
| Dentition | 8 | 3 | 1 | 1 | .. | 1 | .. | 1 | 1 |
| Simple Meningitis | 1 | 1 | .. | .. | .. | .. | .. | .. | .. |
| Convulsions | 4 | 1 | .. | 1 | 1 | .. | .. | .. | 1 |
| Abscess of Brain | 1 | .. | .. | .. | 1 | .. | .. | .. | .. |
| Otitis, Mastoid Disease | 1 | .. | .. | .. | .. | 1 | .. | .. | .. |
| Acute Bronchitis | 11 | 1 | .. | 2 | 2 | .. | 3 | 2 | 1 |
| Bronchitis (not specified) | 4 | 1 | .. | 2 | .. | .. | 1 | .. | .. |
| Lobar Croupous Pneumonia | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| Lobular Broncho Pneumonia | 14 | 1 | 1 | 1 | 5 | 4 | .. | .. | 2 |
| Diseases of Stomach | 2 | .. | 1 | .. | .. | 1 | .. | .. | .. |
| Enteritis | 12 | 3 | 4 | 2 | .. | 1 | 1 | 1 | .. |
| Gastritis | 1 | .. | .. | .. | 1 | .. | .. | .. | .. |
| Intestinal Obstruction | 1 | .. | .. | .. | .. | .. | .. | 1 | .. |
| Intussusception of Bowel | 1 | 1 | .. | .. | .. | .. | .. | .. | .. |
| Nephritis | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. |
| Suffocation : Overlaying | 1 | .. | 1 | .. | .. | .. | .. | .. | .. |
| Ill-defined | 4 | .. | .. | 1 | .. | 1 | 1 | .. | 1 |
| | 149 | 31 | 15 | 23 | 21 | 25 | 13 | 14 | 7 |

In dealing with such a difficult matter, many schemes have been and are being tried in different places with more or less success, but as yet in Accrington, beyond improved sanitation, no organised attack has been made to reduce the number of infant deaths, which amounts year by year to over twenty per cent. of the total deaths in the town. At the present time a scheme for the extension of the Victoria Hospital, whereby accommodation will be provided for children is under discussion, and if carried out I believe it will prove a most effectual means of dealing with some of those cases which we now look upon as preventable deaths. The removal of such children to clean and comfortable quarters, where they would have the benefit of skilled nursing, and their diet subjected to scientific supervision, seems to me the best way under present circumstances, of effectually dealing with a large number of these cases.

For the last fourteen years the Infant Mortality has been :—

| | |
|---|---|
| 1891 | 151.8 |
| 1892 | 138.0 |
| 1893 | 190.3 |
| 1894 | 122.0 |
| 1895 | 192.3 |
| 1896 | 171.4 |
| 1897 | 187.38 |
| 1898 | 201.15 |
| 1899 | 178.98 |
| 1900 | 144.65 |
| 1901 | 159.21 |
| 1902 | 130.60 |
| 1903 | 130.43 |
| 1904 | 148.55 |

**Zymotic Diseases.**—The principal Fevers have caused 65 deaths, giving a *Zymotic* death-rate equal to 1.46 per 1,000 per annum.

| | |
|---|---|
| Measles | 25 |
| Scarlet Fever | 6 |
| Whooping Cough | 14 |
| Diphtheria | 2 |
| Enteric Fever | 7 |
| *Zymotic* Enteritis | 10 |
| Erysipelas | 1 |
| | 65 |

The number of deaths from the Principal Zymotic Diseases for the last 24 years is as under :—

| DISEASES. | 1881 | 1882 | 1883 | 1884 | 1885 | 1886 | 1887 | 1888 | 1889 | 1890 | 1891 | 1892 | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 | 1899 | 1900 | 1901 | 1902 | 1903 | 1904 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Scarlatina ...... | 7 | 138 | 17 | 3 | 19 | 8 | 49 | 7 | 8 | 23 | 6 | 2 | 1 | 2 | 9 | 8 | 9 | 11 | 10 | 4 | 9 | 4 | 21 | 6 |
| Measles ........ | 5 | 18 | 2 | 67 | 9 | 28 | 15 | 3 | 141 | 1 | 37 | .. | 34 | 2 | 15 | 6 | 20 | 30 | 2 | 21 | 21 | 4 | 35 | 25 |
| Enteric Fever .. | 4 | 8 | 10 | 7 | 7 | 8 | 7 | 12 | 10 | 8 | 9 | 7 | 6 | 3 | 13 | 10 | 5 | 13 | 4 | 7 | 8 | 6 | 8 | 7 |
| Doubtful Fevers.. | 2 | 5 | .. | 1 | 1 | 1 | 2 | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Diarrhœa ...... | 12 | 30 | 27 | 40 | 19 | 26 | 30 | 21 | 27 | 18 | 11 | 23 | 35 | 12 | 59 | 28 | 31 | 30 | 57 | 29 | 32 | 3 | 11 | 16 |
| Whooping Cough . | 28 | 7 | 13 | 30 | 19 | 38 | 10 | 13 | 21 | 5 | 15 | 32 | 14 | 3 | 7 | 21 | 8 | 8 | 9 | 13 | 4 | 16 | 1 | 14 |
| Diphtheria .... Membranous Croup | 3 | 3 | 1 | 3 | 3 | 5 | .. | 4 | 3 | 4 | 2 | 19 | 4 | 6 | 6 | 2 | 6 | 7 | 6 | 10 | 3 | 6 | 4 | 2 |
| Smallpox ...... | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
|  | 61 | 209 | 70 | 151 | 77 | 114 | 113 | 61 | 211 | 59 | 80 | 84 | 94 | 29 | 109 | 75 | 79 | 99 | 88 | 84 | 77 | 39 | 81 | 70 |

**Scarlet Fever.**—The incidence and mortality of Scarlet Fever has been as follows:—

| | Borough. | N.W. | S.W. | N.E. | S.E. |
|---|---|---|---|---|---|
| Cases notified .... | 157 | 40 | 56 | 35 | 26 |
| Deaths ........ | 6 | 2 | 2 | .. | 2 |

Hospital isolation of this disease is not practised at all in the Borough. Isolation at home is advised, children from the houses affected are excluded from school, and disinfection of rooms and bedding is carried out after the recovery of the patient.

**Enteric Fever.**—Typhoid Fever has been certified as the cause of seven deaths out of thirty cases notified.

| | Borough. | N.W. | S.W. | N.E. | S.E. |
|---|---|---|---|---|---|
| Cases notified .... | 30 | 8 | 11 | 8 | 3 |
| Deaths ........ | 7 | 2 | 2 | 3 | .. |

The very high mortality of this disease not only for the present year, but also for years back, averaging for the last five years nearly 25% of the cases notified, demands the attention of the Council. When this is compared with the death-rate occurring in some well-regulated Hospitals, where in recent times the mortality has been reduced to 5% and 6%, the urgency of the matter is made plain. In the treatment of this disease, all medical men are agreed that nursing and suitable quarters are of the very first importance. Our district nurses have for the last few years rendered very great service to the sufferers from this disease, had it not been for their help I am sure that the mortality would have been higher than it is. In many general Hospitals, Typhoid Fever is nursed, and I would suggest to the Council the advisability of enquiring whether when extensions are made to the Victoria Hospital, provision could not be made for the accommodation of Typhoid patients.

**Measles.**—The epidemic of Measles which commenced in North-West Ward during last autumn, continued during the early months of the present year, and resulted in 25 deaths as under :—

| N.W. | S.W. | N.E. | S.E. |
|---|---|---|---|
| 1 | 7 | 7 | 10 |

Measles not being a notifiable disease, it is impossible to state how many cases occurred.

Twenty of the 25 deaths were under 2 years of age, showing the very great fatality of this complaint in young children. If we take the whole of the 60 deaths that occurred as a result of this disease during the two years, the age periods come out as follows :—

| 0 to 1. | 1 to 2. | 2 to 3. | 3 to 4. | 4 to 5. | 5 to 10. |
|---|---|---|---|---|---|
| 15 | 28 | 7 | 6 | 3 | 1 |

One attack of Measles usually gives immunity from the disease. The above table shows the great importance of using every endeavour to keep the children under three years of age away from the chance of infection.

**Whooping Cough.**—There was a considerable prevalence of Whooping Cough during the year, which resulted in 14 deaths, all of them under 3 years of age.

This disease is, unfortunately, looked upon as trifling, but the tables show that during the last 24 years it has been the cause of more deaths than Typhoid Fever, Diphtheria, Croup, and Smallpox put together, in fact, and as a rule, it is much more fatal than Scarlet Fever.

**Phthisis.**—Tuberculous Disease has been responsible for 72 deaths, which is a little over 10% of the total mortality.

The tabulation of these deaths, according to age periods, Sexes, and Wards, will be found in Tables VI. and VII.

The comparative mortality from this disease in the various Wards is perhaps best shown by the following table, which represents the number of persons dying each year from this form of disease per 10,000 persons living, so that the figures are perfectly comparable, each Ward being represented of the same size, viz.: a population of 10,000.

The figures in these columns represent the number of persons who would have died from this form of disease if each Ward had had a population of 10,000 persons, that is, the death-rate per 10,000 persons living.

| YEAR. | RATES PER 10,000. | | | |
|---|---|---|---|---|
| | North-West. | South-West. | North-East. | South-East. |
| 1900.......... | 18.5 | 15.1 | 10.9 | 7.6 |
| 1901.......... | 20.1 | 5.9 | 13.6 | 25.3 |
| 1902.......... | 16.3 | 14.8 | 15.3 | 16.3 |
| 1903.......... | 18.8 | 12.4 | 13.3 | 13.7 |
| 1904.......... | 19.6 | 12.3 | 15.9 | 18.5 |
| Average for 5 years 1900–4........ | 18.7 | 12.1 | 13.8 | 16.3 |

The prevalence of this affection, which is a preventable disease, and which is a filth disease, a disease which is doomed to extinction before very many years go by, if a reasonable course is adopted, ought to be looked upon by every Health Authority with feelings of intolerance.

The highest function of any Health Authority is to prevent disease, and here is an enemy accounting for 10% of our total deaths, very frequently choosing for its victims the very brightest and best brains of the community. What is at present being done to oppose the ravages of this disease which has been well styled the "White Scourge"? Beyond the very great improvements in the general hygiene and cleanliness of the town, together with the dissemination of knowledge bearing on the matter which, be it said, has resulted in the reduction of the death rate from this cause by one half during the last twenty-five years, little really effectual resistance is being offered. Voluntary notification of the disease is practically a dead letter. Disinfection of rooms and clothing after death or during the attack is an effort in the right direction, and no doubt productive of some good, but more requires to be done before Tuberculosis, like the Plague and Typhus Fever, becomes a rarity in the land. Let it be known that one case comes from another, and that the partaking of alcohol in excess, and apart from meals, reduces the resisting power against an attack of the disease, and that in the early stages certainly it is a curable complaint: then surely some reasonable scheme can be devised to help on the extinction of this scourge. If the same care was taken in regard to Tuberculosis as is taken for Small-pox, which has caused only two deaths in our borough since 1881, I feel sure that the vanishing point of the disease would be brought within measurable distance.

To begin with, I would suggest that arrangements be made for the isolation, in a suitable building, of the worst cases, which are undoubtedly those most dangerous as propagators of the disease. This need not cost a great amount of money, and would serve to make the declining days of these poor sufferers far more comfortable and would at the same time be a most effectual effort in preventing the disease from spreading to other persons. To my mind it is one of the disgraces of present day legislation that so little effectual resistance is being offered to this terrible and melancholy affliction.

| DISEASE. | Total. | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 to 55 | 55 to 65 | 65 to 70 | 70 to 80 | 80 and up | WARDS. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | North-West | | South-West | | North-East | | South-East | |
| | | | | | | | | | | | | M | F | M | F | M | F | M | F |
| Cancer of Stomach ........ | 13 | 1 | .. | .. | 1 | 1 | 1 | 5 | 2 | 2 | .. | 1 | 2 | 2 | 1 | 1 | 3 | 2 | 1 |
| ,, Æsophagus ...... | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| ,, Sigmoid Flexure .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. |
| ,, Omentum ...... | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| ,, Uterus .......... | 6 | .. | .. | .. | 2 | 2 | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | 3 | .. | 2 |
| ,, Liver .......... | 3 | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | 2 | .. | 1 | .. | .. | .. | .. |
| ,, Kidney .......... | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| ,, Lung ............ | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| ,, Ear ............ | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Cancer not localised ...... | 3 | 1 | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | .. | .. |
| Sarcoma of Thigh ........ | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Epithelioma in Groin ...... | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| TOTAL .......... | 33 | 2 | .. | .. | 5 | 5 | 5 | 10 | 2 | 3 | 1 | 1 | 6 | 5 | 3 | 3 | 8 | 3 | 4 |

**Cancer.**—Malignant Disease has caused 33 deaths against 35 last year, the details of which are shown in the accompanying table. Notice that the Stomach has caused 13, the Uterus or Womb 6.

As yet Medical science is unable to offer any preventive measure against this disease, more than that at first it is believed to be essentially a local disease: that is, one confined to the small part in which it first commences, and that if the condition is in the earliest commencement diagnosed and removed by surgical means it can be eradicated. The best chance of a cure would therefore appear to be in early diagnosis of the condition, succeeded by prompt removal by surgical means.

**Water Supply.**—The water is supplied by the Accrington District Gas and Water Board, and their reservoirs are at three different places, viz.: Dean Clough, Mitchells, and Burnley Road, Huncoat.

The water from the largest storage reservoir of the Board, that at Dean Clough, is now delivered into three filter beds, situate at the Cliffe, Great Harwood; after passing through three feet of clean washed sand, one foot of clean washed gravel, and through brick drains, the water is conveyed by the main drains consisting of best glazed half pipes into a covered clean water tank, from which it is pumped into the distributing mains and covered high service reservoir by two high-pressure compound condensing engines, worked at a pressure of 90 to 100-lbs. per square inch.

The water, on passing from the filter, is very clear and of good quality.

The pressure of water to the district of Baxenden having been for some time very irregular, the Board decided to lay a main from the Reservoir at Mitchell's House, by way of Stone Fold and Black Lane to Rising Bridge, thereby making Baxenden the first takers, and insuring a constant supply with ample pressure. This work was completed on the 22nd of November last, and the water turned on by the Chairman of the Board, who afterwards visited several houses situate on the higher levels, and was assured by the inhabitants that the supply was all that could be desired.

The completion of the Filter Beds and Clear Water Reservoir at Mitchell's House has been delayed through settlement of the land caused by the working out of the coal, there is, however, evidence that this settlement has now almost ceased, we may therefore hope to see these filter beds in full work at no very distant date.

On the 17th March, this water was analysed by J. Campbell Brown, D.Sc., Professor of Chemistry, University of Liverpool, particulars as follows :—

**To the Accrington District Gas and Water Board.**

---

**Sample of Water from No. 2 Reservoir, Mitchell's House.**

I have analysed the Sample of Water received from C. Harrison, by rail, on the 13th day of March, 1905, with the following results expressed in parts per 100,000 :—

| Mark and denomination of the sample— | | No. 1 Mitchell's Reservoir |
|---|---|---|
| Total solid matter in solution | | 13.5 |
| Oxygen required to oxodise | in 15 minutes | .096 |
| | in 3 hours | .193 |
| Ammonia | | .106 |
| Ammonia from Organic matter, by distillation with alkaline permanganate | | .022 |
| Nitrogen as Nitrates | | .021 |
| Combined Chlorine | | 1.55 |

Slightly yellow ; turbid ; neutral ; contains a few organisms of varied character.

There is a larger proportion of organic matter in this water than is usual in potable waters. It may, however, be due to peat, and is in other respect excellent.

As Witness my hand, this 17th day of March, 1905.

At the Chemical Laboratories, Brownlow Street, Liverpool.

J. CAMPBELL BROWN, D.Sc.
Professor of Chemistry, University of Liverpool.

## To the Accrington District Gas and Water Board.

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### Sample of Water from Councillor Bunting's House, Holly Bank.

I have analysed the Sample of Water received from Mr. C. Harrison, on the 15th day of March, 1905, with the following results expressed in parts per 100,000 :—

| | | |
|---|---|---|
| Mark and denomination of the sample— | | No. 1, from House tap. |
| Total solid matter in solution............ | | 13.5 |
| Oxygen required to oxodise | in 15 minutes | .077 |
| | in 3 hours .. | .170 |
| Ammonia............................. | | .011 |
| Ammonia from Organic matter, by distillation with alkaline permanganate...... | | .017 |
| Nitrogen as Nitrates and Nitrites ........ | | .021 |
| Combined Chlorine...................... | | 1.6 |

Slightly coloured ; neutral ; Contains flocculent particles, mineral particles, and very few organisms.

This sample is essentially the same as 4858 from the Reservoir, but is slightly better.

As Witness my hand, this 20th day of March, 1905.

At the Chemical Laboratories, Brownlow Street, Liverpool.

J. CAMPBELL BROWN, D.Sc.,
Professor of Chemistry, University of Liverpool.

**Disposal of Excrement.**—No great change has been made during the year in this matter. My report for the year 1900 deals at some length with the method of disposal at the Coppy Clough Sewage Works owned by the Accrington and Church Joint Sewage Board.

**Destructors.**—Information under this head is given in detail in the Sanitary Inspector's Report.

Baxenden still remains without a satisfactory sewage scheme, but its altitude and rural surroundings make good what is deficient in sanitary accommodation.

**Disinfecting Apparatus.**—The New Steam Disinfecting Apparatus which was constructed during 1903 continues to work satisfactorily. It is a compliment to the efficacy of the apparatus and to Mr. Diggle and the staff responsible for its management that no case of Small-pox has ever recurred which could in any way be laid to the blame of inefficient disinfection.

**Abattoirs.**—The Public Abattoirs are regularly inspected and are under the constant care of one of the Corporation workmen. The Sanitary Inspector's Report gives details of the destruction of carcases that have been considered unfit for human food.

The stalls on the Market Ground receive regular attention from the Sanitary Inspector, and his Report gives full details of the action taken during the year against persons offering unwholesome food for sale.

**Dairies, Cowsheds, and Milkshops.**—Considerable improvements have been made in several of the Cowsheds in the Borough, as a result of notices served upon cowkeepers to conform with the regulations formulated in 1901.

Some details of the work done during the year will be found in the Sanitary Inspector's Report.

This important matter, dealing as it does with the food of infants, and what should form the most important part of the food of growing children, is worthy of the greatest consideration. It seems to me that what ought to be aimed at is the best and most economical way of supplying clean healthy milk from clean healthy cows at the doors of each and every house in the borough. To do this effectually would mean far greater powers over those who are responsible for the milk supply than the Council at present possess, so that some who have studied the matter carefully, are strong in advocating schemes for the municipalization of the milk supply. The difficulties which some at least of our farmers have to encounter, through inadequate conveniences, would lend colour to the proposed change. It is needful to draw attention to the fact that in some households the milk receives greater contamination after it leaves the farmer than it was guilty of before. Milk should always be protected from the inroad of dust and dirt floating in the atmosphere by being covered up. Dust and dirt carries with it the germs of disease, and milk forms a most suitable medium for their growth.

**Factory and Workshop Acts.**—The survey of all the Workshops is in progress, but this work has been greatly interfered with through the presence of Small-pox in the borough, which engages for the time, much of the energies of the Sanitary Inspector's Staff. No over-crowding has been found. The closet accommodation has been greatly improved and other sanitary arrangements were generally satisfactory.

(16) The following is a copy of the official form required by the Home Office as to the proceedings taken in connection with the supervision of Factories, Workshops, &c.:—

## 1.—INSPECTION.

INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES.

| PREMISES. | Number of | | |
|---|---|---|---|
| | Inspections. | Written Notices. | Prosecutions. |
| FACTORIES .....................<br>(Including Factory Laundries.) | 24 | 1 | .. |
| WORKSHOPS .....................<br>(Including Workshop Laundries.) | 54 | 7 | .. |
| WORKPLACES .................. | 38 | 5 | .. |
| HOMEWORKERS' PREMISES ...... | 2 | .. | .. |
| TOTAL .............. | 118 | 13 | .. |

## 2.—DEFECTS FOUND.

| PARTICULARS. | Number of Defects. | | | Number of Prosecutions. |
|---|---|---|---|---|
| | Found | Remedied | Referred to H.M. Inspector. | |
| Nuisances under the Public Health Acts :—* | | | | |
| Want of Cleanliness | 1 | 1 | .. | .. |
| Want of Ventilation | .. | .. | ... | .. |
| Overcrowding | .. | .. | .. | .. |
| Want of Drainage of Floors | .. | .. | .. | .. |
| Other Nuisances | 1 | 1 | .. | .. |
| †Sanitary accommodations .. Insufficient | 4 | 3 | .. | .. |
| Unsuitable or Defective | 4 | 4 | .. | .. |
| Not separate for sexes | .. | .. | .. | .. |
| Offences under the Factory and Workshop Act :— | | | | |
| Illegal occupation of underground bakehouse (S. 101) | .. | .. | .. | .. |
| Breach of special Sanitary requirements for bakehouses (SS. 97 to 100) | .. | .. | .. | .. |
| Failure as regard lists of outworkers (S. 107) | .. | .. | .. | .. |
| Giving out work to be done in premises which are Unwholesome (S. 108) | .. | .. | .. | .. |
| Infected (S. 110) | .. | .. | .. | .. |
| Allowing wearing apparel to be made in premises infected by Scarlet Fever or Small-pox (S. 109) | .. | .. | .. | .. |
| Other offences | .. | .. | .. | .. |
| TOTAL | 10 | 9 | .. | .. |

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* Including those specified in Sections 2, 3, 7 and 8, of the Factory Act as remediable under the Public Health Acts.

† State here whether Section 22 of the Public Health Acts Amendment Act, 1890, has been adopted by the District Council; and if so what standard of sufficiency and suitability of Sanitary accommodation for persons employed in Factories and Workshops has been enforced.

## 3.—OTHER MATTERS.

| Class. | Number. | |
|---|---|---|
| Matters notified to H.M. Inspectors of Factories :— | | |
| Failure to affix Abstract of the Factory and Workshop Act, (S. 133) | .. | |
| Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts (S. 5) — Notified by H.M. Inspector | .. | |
| Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory Acts (S. 5) — Reports (of action taken) sent to H.M. Inspectors | .. | |
| Other | .. | |
| Underground Bakehouses (S. 101) :— | | |
| In use during 1903 | 10 | |
| Certificates granted — In 1903 | .. | |
| Certificates granted — In 1904 | 6 | |
| In use at the end of 1904 | 7 | |
| Homework :— | Number of | |
| Lists of Outworkers* (S. 107) :— | Lists. | Outwk's. |
| Lists received | 2 | 2 |
| Addresses of outworkers — Forwarded to other Authorities | .. | |
| Addresses of outworkers — Received from other Authorities | .. | |
| Homework in unwholesome or infected premises :— | Wearing Apparel. | Other. |
| Notices prohibiting homework in unwholesome premises (S. 108) | .. | .. |
| Cases of infectious disease notified in homeworkers' premises | .. | .. |
| Orders prohibiting homework in infected premises (S. 110) | .. | .. |
| Workshops on the Register (S. 131) at the end of 1904. | | |
| Important classes of workshops, such as workshop bakehouses, may be enumerated here. — Bakers, Confectioners | 30 | |
| Dressmakers, Milliners | 35 | |
| Tailors, &c. | 21 | |
| Cloggers, Bootmakers, &c. | 51 | |
| Other Workshops | 115 | |
| Total number of Workshops on Register | 252 | |

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* The Lists should be received twice in the year. The year's figures required in the Table are then obtained by adding together the two half-yearly totals.

The following is a more detailed list of the various Workshops in the Borough.

| | |
|---|---|
| Bakers, Confectioners, etc. | 30 |
| Dress-makers, Milliners, etc. | 55 |
| Tailors | 21 |
| Boot-makers, Cloggers, etc. | 51 |
| Hosiers | 3 |
| Art Needle-worker | 1 |
| Brush-makers | 3 |
| Harness-makers | 3 |
| Cycle repairers | 2 |
| Joiners | 8 |
| Cabinet-makers | 17 |
| Wood Carver | 1 |
| Upholsterer | 1 |
| French Polishers | 3 |
| Plumbers | 4 |
| Painters | 6 |
| Masons | 2 |
| Smiths | 8 |
| Wheelwrights | 5 |
| Refrigerator Maker | 1 |
| Picture Framers | 2 |
| Jewellers | 2 |
| Photographers | 2 |
| Sugar Boiler | 1 |
| Cooper | 1 |
| Tinsmiths | 2 |
| Chemical Manufacturers | 5 |
| Paper Bag Maker | 1 |
| Rag Sorter | 1 |
| Waste Dealer | 1 |
| Beer Bottler | 1 |
| Herb Beer Maker | 1 |
| Fish Curer | 1 |
| Tripe Boilers | 5 |
| Gut Scraper | 1 |

**Observations.**—In giving suggestions to the gentlemen of the Council, it unfortunately happens that a Medical Officer of Health can seldom open his mouth without asking the Council to open their pockets, and when one finds that the demands on these needful essentials are already over drained, it is necessary to be sure that any suggestion offered should be able to pay a good dividend of result.

Quite recently the Medical Officer of Health of an important Metropolitan Borough pointed out that during the last century, the greatest progress in preventive medical science had been in the direction of "civic cleanliness." We now have better houses, better drains, cleaner streets, better disposal of refuse, and what was wanted now, was improvement specially in what might be called "personal hygiene." The people who live surrounded by these results of municipal progress have not improved in a corresponding degree.

I have many times suggested the advisability of appointing a Lady Health Visitor to use her influence in this direction. The revelations as to the condition of some households which are brought to light by the Inspector for the Society for Prevention of Cruelty to Children, I think make this need very evident.

The excessive amount of black smoke sent into the atmosphere by the long chimneys leads to the debility and destruction of plant life in the surrounding country, to say nothing of its influence upon the ventilation of houses; there is so much dirt in the atmosphere that people will not open their windows.

The condition of the schools in the borough leaves much to be desired as regards their cleanliness, much more needs to be done before the school-rooms can be looked upon by the children as examples of cleanliness and sweetness. A small staff of men provided with suitable tools in the shape of ladders, brushes, sprays, &c., would be most usefully employed in going round to each School and giving it a thorough washing and cleansing at least three or four times a year. This to be in addition to the usual duties of the regular school cleaner.

ARTHUR GREENHALGH,
Medical Officer of Health.

## Table showing Birth and Death Rates in certain Towns in 1904.

| NAME. | Population. | Birth Rate. | Death Rate. | Infants' Deaths per 1000 Births. | Zymotic Death Rate. | Respiratory Death Rate. | Phthisis Death Rate. | Death Rate from other forms of Tuberculosis. | Malignant Disease Death Rate. | Average Death Rate for 10 years, 1894-1903. |
|---|---|---|---|---|---|---|---|---|---|---|
| Ashton-under-Lyne.... | 44541 | 27.0 | 17.2 | 172 | 1.8 | 3.4 | .9 | .89 | .80 | 20.0 |
| Blackburn .......... | 131908 | 23.5 | 17.2 | 191.9 | 2.4 | 3.7 | .94 | .6 | .81 | 19.5 |
| Burton-on-Trent ...... | 51934 | 26.07 | 15.05 | 118 | 1.54 | 2.42 | 1.46 | .36 | .85 | 14.75 |
| Burnley.............. | 98500 | 27.25 | 20. | 232.7 | 3.83 | 3.61 | 1.51 | .71 | .42 | 19.6 |
| Bury ................ | 58450 | 23.66 | 17.14 | 163 | 2.30 | 3.11 | 1.66 | .68 | .70 | 18.90 |
| Carlisle .............. | 47350 | 26.9 | 18.5 | 152 | 1.3 | 3.3 | 1.4 | .76 | 1.0 | 18.6 |
| Crewe ............... | 46065 | 30.9 | 14.6 | 160 | 2.04 | 2.95 | .63 | .97 | .52 | 15.9 |
| Darwen ............. | 39516 | 20.7 | 15.2 | 150 | 2.7 | 3.6 | .9 | .3 | .53 | 16.6 |
| Keighley ........... | 43490 | 23.3 | 17.7 | 156 | 2.82 | 2.92 | 1.37 | .78 | 1.10 | 18.0 |
| Lancaster ............ | 43570 | 24.48 | 13.01 | 153 | .96 | 2.22 | 1.05 | .82 | .61 | 14.49 |
| Nelson .............. | 35000 | 20.3 | 12.2 | 162 | 1.3 | 3.1 | .68 | .25 | .45 | 12.1 |
| Rochdale ........... | 85600 | 22.8 | 17.7 | 152 | 2.07 | 3.47 | 1.24 | .26 | .88 | 18.5 |
| Southport .......... | 50385 | 17.51 | 14.45 | 130 | .73 | 1.93 | 1.11 | .44 | 1.11 | 16.23 |
| Wigan .............. | 64249 | 34.59 | 21.49 | 188 | 3.14 | 4.74 | 1.08 | .40 | | 21.24 |
| Haslingden .......... | 18743 | 19.5 | 14.1 | 147.5 | 1.5 | 2.4 | .6 | .1 | .9 | 16. |
| Oswaldtwistle ........ | 14600 | 21.91 | 18.76 | 191 | 2.67 | 4.04 | .95 | .89 | .75 | 16.28 |
| Clayton-le-Moors .... | 8500 | 27.1 | 16.4 | 151 | 2.8 | 3.05 | .47 | .36 | .36 | 17.1 |
| Accrington .......... | 44300 | 22.64 | 15.77 | 148.55 | 1.46 | 3.52 | 1.24 | .38 | .74 | 15.62 |

*Sanitary Department.*

# ANNUAL REPORT

OF THE

# Sanitary Inspector

*For the Year 1904.*

**RICHARD DIGGLE,** Assoc. Royal San. Inst.,
*Sanitary Inspector.*

HEALTH OFFICE,
TOWN HALL,
ACCRINGTON.

**To the Chairman and Members
of the Health Committee.**

GENTLEMEN,

I have the honour to submit to you my SIXTH ANNUAL REPORT as Sanitary Inspector for the Borough of Accrington.

Satisfactory improvements have been made in the general sanitation of house property.

One block, numbered 6, 8, and 10 Holden Street, and 2, 4, 6, 8, and 10 Hannah Street, the closets and ashpits of which were in a very unsatisfactory condition. I conferred with the owner, who met me in a very friendly spirit, and prepared a plan shewing the yards and closets, &c., reconstructed. He expressed his satisfaction with the scheme, and carried out the necessary work.

I find better results by this way of meeting some owners, although more time is taken up. It frequently happens that the owners are prepared to go further than they would if formal notices were served.

Other blocks were also dealt with in a similar manner, viz. :—

3 Houses, Nos. 68, 70, and 72 Dowry Street.
10 Houses, Nos. 68, 70, 72, 74, 76, 78, 80, 82, 84, and 86 Portland Street.
3 Houses, Nos. 6, 8, and 10 Rutland Street.
4 Houses, Nos. 33, 35, 37, and 39 Higher Antley Street.
2 Houses, Nos. 28 and 30 Lemonius Street.

In addition to the foregoing, the following Table shows other Sanitary work attended to :—

| | |
|---|---|
| Closets and Drains blocked .............. | 1143 |
| Closets and Drains opened .............. | 1130 |
| Water Closets blocked beyond trap ...... | 13 |
| Tipplers, etc., broken .................. | 10 |
| Street Gullies blocked, &c. .............. | 14 |
| Closets and Ashpits require repairing ...... | 113 |
| Insufficient Closet and Ashpit accommodation .......................... | 3 |
| Insanitary Privies..................... | 9 |
| Defective drainage .................. | 120 |
| Drains inside houses not disconnected .... | 10 |
| Defective Sinks and Waste-pipes.......... | 115 |
| Defective Troughing and Down-spouts .... | 7 |
| Houses damp......................... | 7 |
| Accumulations of Manure .............. | 3 |
| Keeping Hens in unsuitable premises ...... | 1 |
| Other Nuisances...................... | 8 |
| Closets altered from Old Privies .......... | 9 |
| Closets altered from Pail System .......... | 98 |

## Disinfection.

During the year 234 cases of Infectious Disease have been notified, as against 379 cases the previous year.

The whole of the cases were visited, the premises inspected, and verbal and printed instructions given as to the proper means of isolation of infected persons, and the preventive measures to be observed to prevent as far as possible the spread of the disease.

1,300 Articles of Clothing, Bedding, &c., and all Books from infected houses belonging to Public Libraries have been disinfected, 409 Articles of Clothing, &c., burnt, and 211 rooms fumigated.

## Dairies, Cowsheds, and Milkshops Order.

Considerable structural alterations and improvements have been effected in 11 Farms during the year, against 15 last year, and arrangements are being made with a view of improving the sanitary condition of several others during the coming Summer.

Altogether, since the new Order came in force, 25 Farms have been altered, leaving 34 to be dealt with. The process of dealing with them is necessarily slow, as a great many belong to one owner, and as some of the alterations will cost at least £500, it will be seen that it is only right to allow a reasonable time for the alterations to be completed.

The work in connection with the above has entailed the building of nine new shippons, and the reconstruction of 16. The owners are to be complimented for the way in which the work has been carried out, and it has been a pleasure to meet them on all occasions.

## Slaughter Houses.

The following is a summary of the animals slaughtered in the Corporation Abattoirs during the year :—

| | |
|---|---|
| Beasts | 2192 |
| Sheep | 17246 |
| Calves | 381 |
| Pigs | 1958 |

The animals slaughtered were carefully inspected, and any suspicion of disease reported by the Caretaker. As a result of such inspection, five carcases of beef, one calf, one sheep, and six pigs were condemned as unfit for human food. The organs of five cows were also destroyed, being slightly affected with Tuberculosis.

In every instance the carcase was given up to be destroyed without the intervention of a Magistrate.

## Markets.

In December, four persons were summoned for exposing for sale unsound rabbits on the Market. They were all bad cases, two of the men had been previously warned. The Magistrates imposed a fine of £3 and costs in each case, the total fines, &c., amounting to £17 7s. 0d.

## Common Lodging Houses.

The Lodging Houses have been visited every week, and cleanliness strictly enforced. It is a pleasure to report that the houses are well conducted.

## Offensive Trades.

These trades have been carried on in a satisfactory manner, and the premises are frequently inspected, which is generally sufficient for the business to be carried on with a minimum of nuisance.

## Public Urinals.

One new urinal has been provided in Manchester Road, and the one near Messrs. Howard & Bullough's, in St. James' Street, enlarged and improved.

The question of providing an underground convenience in the centre of the town has been considered by the Committee, but information obtained from other towns shows that such conveniences are expensive.

Many complaints are made to me of nuisances created in back streets, especially near the centre of the town. I am of opinion that if public conveniences were provided, the nuisance would still exist, unless the back streets were lighted. The lighting of back streets is a question which I think should be considered, it would, in my opinion, do much to stop the nuisances created.

## Petroleum.

It will be necessary to put the requirements of the Petroleum Acts in force on account of the low flash oils being sold for use on Motor Cars. The storing of these Oils on premises can only be done after a Licence has been granted by the Local Authority. It is my intention to ascertain under what conditions these oils are being stored, and report to the Committee.

## Diseases of Animals Acts.

A carcase of a cow taken from Knowles Buildings, Green Haworth, to Blackburn Abattoirs, was found by the Meat Inspector to be affected with Anthrax. The case was reported to the Board of Agriculture, and the provisions of the Diseases of Animals Act were put in force. Fortunately no further cases occurred.

A suspected case of Anthrax was reported in October, at Accrington House Farm, and an ear from the carcase was submitted for examination, but no Anthrax spores were found.

## Underground Bakehouses.

The Sub-Committee was deputed to inspect the Cellar Bakehouses (10 in number), and a report was prepared and submitted to the Health Committee, with the result that three Cellar Bakehouses, viz :—358 Blackburn Road, 384 Blackburn Road, and 437a, Blackburn Road were considered unfit for the purpose and notices were served on the owners to discontinue the use of such Bakehouses. The remaining seven, viz. :—20 Blackburn Road, 116 Blackburn Road, 162 Blackburn Road, 210 Blackburn Road, 3 Whalley Road, 8 Whalley Road, and 37 Birtwistle Street, were considered suitable, provided certain alterations were carried out.

The alterations have since been done and certificates granted as required by the Factory & Workshop Acts.

## Scavenging.

The paved streets and roads, of which there are about 40 miles, are regularly swept.

The state of cleanliness in which streets can be kept depends largely on the conditions of the paving. A well-paved street requires little labour, but when the paving becomes uneven and allows water to lodge in wet weather, it entails more labour and no satisfaction to those in charge of the scavenging, it is also annoying to pedestrians, passing vehicles often causing them to be splashed with mud.

Both myself and Mr. Newton are of opinion that it is false economy to cut too fine the expenditure on maintenance of highways. When the surface is uneven the wear of the setts is much greater, and the depreciation on vehicles is considerable. It also accounts for coal and other material being shaken off carts to be ground into dust.

2,329 loads of street sweepings, and 1301 loads of refuse from street gullies were collected during the year ; also 549 loads of snow.

## Collection of Refuse.

In October, a new departure was instituted, namely :—the collection of waste paper and cardboard in bags from business premises, the amount collected being about one ton per week. The paper is sold, but not at a price to cover cost of collection. The advantages are that this light material is kept out of the ashpits and tubs, and the cost of destruction is obviated, paper in bulk not being good material to destroy by fire.

## Destructors.

The accompanying Table shows the cost of collection and destruction of refuse since the inauguration of the Destructor. I was convinced that much could be done to reduce the cost, and worked with this end in view, and it will be noticed that the cost is 9.1d. per ton less than the year 1901, or about £450 per year on 11,966 tons.

The Destructors continue to work satisfactorily, but I am still of opinion that a great improvement would be effected if the No. 2 Boiler was coupled to the Destructors, for reasons given in my report last year. I hope before any extension in the Boiler-house becomes necessary this matter will be considered by the Electricity Committee.

## BOROUGH OF ACCRINGTON.

# Cost of Collection and Destruction of Refuse.

| MONTH. | DOMESTIC REFUSE. | | | Market, Fish and Trade Refuse. | Total weight of Refuse. | COST OF COLLECTION. (Domestic Refuse only.) | | | | Cost of Destruction (all refuse) Wages only. | | TOTAL COST. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of Loads | Weight. | Average weight per Load. | | | Manual Labour | | Team Labour. | | Amount. | per ton. | Amount. | per ton. |
| | | | | | | Amount. | per ton. | Amount. | per ton. | | | | |
| | | T. C. Q. | T. C. Q. | T. C. Q. | T. C. Q. | £ s. d. | s. d. | £ s. d. | s. d. | £ s. d. | s. d. | £ s. d. | s. d. |
| January | 612 | 972 19 0 | 1 11 3 | 39 2 1 | 1012 1 1 | 38 6 8 | 0 9.4 | 62 17 9 | 1 3.2 | 62 12 11 | 1 2.8 | 163 17 4 | 3 3.4 |
| February | 595 | 958 19 3 | 1 12 0 | 32 19 0 | 991 18 3 | 36 14 8 | 0 9.2 | 59 3 6 | 1 2.8 | 65 9 10 | 1 3.8 | 161 8 0 | 3 3.8 |
| March | 780 | 1251 14 3 | 1 12 0 | 44 3 1 | 1295 18 0 | 49 12 7 | 0 9.5 | 78 3 9 | 1 3 | 83 6 3 | 1 3.4 | 211 2 7 | 3 3.9 |
| April | 561 | 864 6 0 | 1 10 3 | 35 3 3 | 899 9 3 | 33 14 8 | 0 9.3 | 57 5 3 | 1 3.9 | 56 2 11 | 1 3 | 147 2 10 | 3 4.2 |
| May | 593 | 902 5 0 | 1 10 1 | 34 13 1 | 936 18 1 | 35 13 8 | 0 9.4 | 59 8 0 | 1 3.8 | 54 13 11 | 1 2 | 149 15 7 | 3 3.2 |
| June | 737 | 1125 7 2 | 1 10 2 | 41 19 2 | 1167 7 0 | 43 0 10 | 0 9.1 | 73 4 9 | 1 3.6 | 72 7 5 | 1 2.8 | 188 13 0 | 3 3.5 |
| July | 545 | 815 10 2 | 1 9 3 | 41 2 2 | 850 13 0 | 32 13 8 | 0 9.6 | 57 5 3 | 1 4.8 | 50 18 11 | 1 2.2 | 140 17 10 | 3 4.6 |
| August | 659 | 993 10 1 | 1 10 0 | 54 1 3 | 1047 12 0 | 39 10 10 | 0 9.5 | 70 17 6 | 1 5.1 | 60 12 10 | 1 1.9 | 171 1 2 | 3 4.5 |
| September | 530 | 802 13 0 | 1 10 0 | 44 0 1 | 846 13 1 | 29 8 8 | 0 8.8 | 54 9 0 | 1 4.2 | 50 0 0 | 1 2.1 | 133 17 8 | 3 3.1 |
| October | 585 | 894 9 1 | 1 10 2 | 40 10 0 | 934 19 1 | 32 1 8 | 0 8.6 | 61 15 3 | 1 4.6 | 50 17 7 | 1 1 | 144 14 6 | 3 2.2 |
| November | 716 | 1087 12 2 | 1 10 1 | 50 8 0 | 1138 0 2 | 40 0 0 | 0 8.8 | 75 5 3 | 1 4.6 | 64 7 7 | 1 1.5 | 179 12 10 | 3 2.9 |
| December | 525 | 798 17 3 | 1 10 1 | 39 13 1 | 838 11 0 | 29 7 11 | 0 8.8 | 55 11 6 | 1 4.7 | 50 12 5 | 1 2.5 | 135 11 10 | 3 4 |
| **1904** | **7438** | **11468 5 1** | **1 10 3** | **497 16 3** | **11966 2 0** | **440 5 10** | **0 9.2** | **765 6 9** | **1 4** | **722 2 7** | **1 2.4** | **1927 15 2** | **3 3.6** |
| **1903** | 7961 | 11031 9 2 | 1 7 2 | 493 7 2 | 11524 17 0 | 409 7 9 | 0 8.9 | 836 7 6 | 1 6.1 | 798 1 2 | 1 4.6 | 2043 16 5 | 3 7.6 |
| **1902** | 9418 | 11503 13 3 | 1 4 1 | 441 17 1 | 11945 11 0 | 476 2 5 | 0 9.9 | 978 1 6 | 1 8.4 | 847 7 7 | 1 5.0 | 2301 11 6 | 3 11.3 |
| **1901** | 8783 | 10416 12 1 | 1 3 2 | 363 7 3 | 10780 0 0 | 453 3 8 | 0 10.4 | 890 15 6 | 1 8.5 | 800 13 11 | 1 5.8 | 2144 13 1 | 4 0.7 |

*R. DIGGLE, Superintendent.*

The Dust Catcher has now been working 18 months, and no complaints have been made as to dust being emitted from the chimney. The flues have not been cleaned since the erection, the pull on the chimney being sufficient to keep the flues clear.

56 tons 2 cwts. of scrap tin have been picked out of the refuse tipped at the Destructor ; this material filled 19 cattle wagons, and realised £14.

1669 tons of clinker have been sold for concrete purposes and forming the under-bed for street paving and flagging. 575 loads of large clinker have been sold to Oswaldtwistle Urban District Council for filter beds at their Sewage Works.

640 tons of mortar have been ground, realising £160, as compared with 732 tons in 1903.

RICHARD DIGGLE,

SANITARY INSPECTOR.

# LOCAL GOVERNMENT BOARD RETURN.

## TABLE I.—For Whole District.

| YEAR. 1 | Population estimated to Middle of each Year. 2 | BIRTHS. | | DEATHS UNDER ONE YEAR OF AGE. | | DEATHS AT ALL AGES. TOTAL. | | Deaths in Public Institutions. 9 | Deaths of Non-residents registered in District. 10 | Deaths of Residents registered beyond District. 11 | DEATHS AT ALL AGES NETT. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number. 3 | Rate.* 4 | Number. 5 | Rate per 1000 Births registered. 6 | Number. 7 | Rate.* 8 | | | | Number. 12 | Rate.* 13 |
| 1894 .... | 40187 | 1057 | 26.30 | 129 | 122.0 | 532 | 13.23 | .. | .. | .. | .. | .. |
| 1895 .... | 40666 | 1118 | 27.49 | 215 | 192.3 | 738 | 18.14 | .. | .. | .. | .. | .. |
| 1896 .... | 41125 | 1138 | 27.67 | 195 | 171.4 | 653 | 15.87 | .. | .. | .. | .. | .. |
| 1897 .... | 41568 | 1062 | 25·54 | 199 | 197.38 | 714 | 17.17 | .. | .. | .. | .. | .. |
| 1898 .... | 41954 | 1034 | 24.64 | 208 | 201.15 | 662 | 15·77 | .. | .. | .. | .. | .. |
| 1899 .... | 42357 | 1028 | 24.26 | 184 | 178.98 | 646 | 15.25 | .. | .. | .. | .. | .. |
| 1900 .... | 42787 | 1113 | 26.01 | 160 | 143·75 | 658 | 15·37 | 12 | 3 | 32 | 687 | 16.05 |
| 1901 .... | 43223 | 1074 | 24.84 | 171 | 159.21 | 689 | 15.94 | 27 | 10 | 27 | 706 | 16.33 |
| 1902 .... | 43500 | 1026 | 23.58 | 134 | 130.60 | 576 | 13.24 | 14 | 10 | 32 | 598 | 13·74 |
| 1903 .... | 44000 | 966 | 21.95 | 126 | 130.43 | 628 | 14.27 | 28 | 13 | 32 | 647 | 14·70 |
| Averages for years 1894–1903. | 42136 | 1061 | 25.19 | 172 | 162.11 | 649 | 15.41 | .. | .. | .. | .. | .. |
| 1904 .... | 44300 | 1003 | 22.64 | 149 | 148.55 | 667 | 15.05 | 18 | 7 | 39 | 699 | 15·77 |

*Rates calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water) 3,426·6

Total population at all ages..(M 20,528, F 22,594)...... 43,122
Number of inhabited houses ........................ 9,515
Average number of persons per house .................. 4·5
At Census of 1901.

# LOCAL GOVERNMENT BOARD RETURN.

## TABLE II.

| NAMES OF LOCALITIES. | 1.—ACCRINGTON. | | | | | 2.—NORTH-WEST WARD. | | | | 3.—SOUTH-WEST WARD. | | | | 4.—NORTH-EAST WARD. | | | | 5.—SOUTH-EAST WARD. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR. | Population estimated to middle of each year. | Births registered. | Deaths at all ages. | Death Rate. | Deaths under 1 year | Population estimated to middle of each year. | Deaths at all ages. | Death Rate. | Deaths under 1 year | Population estimated to middle of each year. | Deaths at all ages. | Death Rate. | Deaths under 1 year | Population estimated to middle of each year. | Deaths at all ages. | Death Rate. | Deaths under 1 year | Population estimated to middle of each year. | Deaths at all ages. | Death Rate. | Deaths under 1 year |
| 1894.. | 40187 | 1057 | 532 | 13.23 | 129 | 9695 | 133 | 13.71 | 36 | 12128 | 156 | 12.03 | 31 | 10526 | 143 | 13.58 | 34 | 7838 | 100 | 12.75 | 28 |
| 1895.. | 40666 | 1118 | 738 | 18.14 | 215 | 9878 | 194 | 19.63 | 58 | 12337 | 202 | 16.37 | 61 | 10606 | 175 | 16.50 | 52 | 7845 | 167 | 21.28 | 44 |
| 1896.. | 41125 | 1138 | 653 | 15.87 | 195 | 10058 | 157 | 15.60 | 49 | 12534 | 178 | 14.20 | 50 | 10682 | 176 | 16.47 | 51 | 7851 | 142 | 18.08 | 45 |
| 1897.. | 41568 | 1062 | 714 | 17.17 | 199 | 10236 | 180 | 17.58 | 59 | 12720 | 182 | 14.30 | 49 | 10755 | 193 | 17.94 | 43 | 7857 | 159 | 20.23 | 48 |
| 1898.. | 41954 | 1034 | 662 | 15.77 | 208 | 10407 | 152 | 14.60 | 48 | 12866 | 157 | 12.20 | 47 | 10819 | 193 | 17.83 | 64 | 7862 | 160 | 20.35 | 49 |
| 1899.. | 42357 | 1028 | 646 | 15.25 | 184 | 10581 | 182 | 17.19 | 55 | 13023 | 169 | 12.97 | 44 | 10886 | 143 | 13.13 | 38 | 7867 | 152 | 19.32 | 47 |
| 1900.. | 42787 | 1113 | 687 | 16.05 | 161 | 10759 | 175 | 16.25 | 35 | 13200 | 186 | 14.09 | 45 | 10956 | 185 | 16.88 | 46 | 7872 | 141 | 17.91 | 35 |
| 1901.. | 43223 | 1074 | 706 | 16.33 | 171 | 10939 | 187 | 17.09 | 44 | 13381 | 191 | 14.27 | 42 | 11027 | 177 | 16.05 | 51 | 7876 | 151 | 19.17 | 34 |
| 1902.. | 43500 | 1026 | 598 | 13.74 | 134 | 11010 | 155 | 14.07 | 32 | 13465 | 168 | 12.47 | 40 | 11098 | 165 | 14.68 | 30 | 7927 | 110 | 13.87 | 32 |
| 1903.. | 44000 | 966 | 647 | 14.70 | 126 | 11115 | 181 | 16.28 | 38 | 13645 | 182 | 13.33 | 39 | 11215 | 174 | 15.51 | 26 | 8025 | 110 | 13.70 | 23 |
| Averages of Years 1894 to 1903 ... | 42136 | 1061 | 658 | 15.62 | 172 | 10467 | 169 | 16.20 | 45 | 12929 | 177 | 13.69 | 44 | 10857 | 172 | 15.87 | 43 | 7882 | 139 | 17.66 | 38 |
| 1904.. | 44300 | 1003 | 699 | 15.77 | 149 | 11176 | 179 | 16.01 | 46 | 13756 | 194 | 14.10 | 44 | 11285 | 193 | 17.10 | 38 | 8083 | 133 | 16.45 | 21 |

# LOCAL GOVERNMENT BOARD RETURN.

Table III.—Cases of Infectious Disease notified during the Year 1904.

| NOTIFIABLE DISEASE. | CASES NOTIFIED IN WHOLE DISTRICT. | | | | | | | TOTAL CASES NOTIFIED IN EACH LOCALITY. | | | | NO. OF CASES REMOVED TO HOSPITAL FROM EACH LOCALITY. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | At all Ages | At Ages—Years. | | | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | Under 1 | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 65 | 65 and upw'd | North West Ward. | South West Ward. | North East Ward. | South East Ward. | North West Ward. | South West Ward. | North East Ward. | South East Ward |
| Smallpox ........ | 4 | .. | .. | .. | .. | 4 | .. | 2 | 1 | .. | 1 | 2 | 1 | .. | 1 |
| Diphtheria ...... | 13 | .. | 3 | 5 | 4 | 1 | .. | 3 | 2 | 5 | 3 | .. | .. | .. | .. |
| Membranous Croup | 1 | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Erysipelas........ | 25 | .. | .. | 4 | 3 | 16 | 2 | 6 | 11 | 5 | 3 | .. | .. | .. | .. |
| Scarlet Fever .... | 157 | .. | 40 | 101 | 13 | 3 | .. | 40 | 56 | 35 | 26 | .. | .. | .. | .. |
| Enteric Fever .... | 30 | .. | .. | 8 | 5 | 17 | .. | 8 | 11 | 8 | 3 | .. | .. | .. | .. |
| Puerperal Fever .. | 4 | .. | .. | .. | 1 | 3 | .. | 2 | 1 | .. | 1 | .. | .. | .. | .. |
| Totals ...... | 234 | .. | 44 | 118 | 26 | 44 | 2 | 62 | 82 | 53 | 37 | 2 | 1 | .. | 1 |

# LOCAL GOVERNMENT BOARD RETURN.

## TABLE IV.—Causes of, and Ages at, Death during the Year 1904.

| CAUSES OF DEATH. | DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES. | | | | | | | DEATHS IN OR BELONGING TO LOCALITIES (AT ALL AGES) | | | | Total Deaths in Public Institutions in the district |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | All Ages. | Under 1 year. | 1 and under 5 | 5 and under 15 | 15 and under 25 | 25 and under 65 | 65 and upwards | North-West. | South-West. | North-East. | South-East. | |
| Measles | 25 | 4 | 21 | .. | .. | .. | .. | 1 | 7 | 7 | 10 | .. |
| Scarlet Fever | 6 | .. | 4 | 1 | 1 | .. | .. | 2 | 2 | .. | 2 | .. |
| Whooping Cough | 14 | 6 | 8 | .. | .. | .. | .. | 4 | 3 | 5 | 2 | .. |
| Diphtheria and Membranous Croup | 2 | .. | 1 | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. |
| Enteric Fever | 7 | .. | .. | .. | 1 | 6 | .. | 2 | 2 | 3 | .. | .. |
| Epidemic Influenza | 15 | .. | .. | .. | 1 | 7 | 7 | 4 | 1 | 9 | 1 | |
| Diarrhœa | 16 | 14 | .. | .. | .. | .. | 2 | 3 | 3 | 9 | 1 | .. |
| Enteritis | 14 | 12 | 2 | .. | .. | .. | .. | 9 | 2 | 2 | 1 | .. |
| Puerperal Fever | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. |
| Erysipelas | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. |
| Other Septic Diseases | 4 | .. | .. | .. | .. | 4 | .. | 2 | 1 | 1 | .. | 1 |
| Phthisis, (Pulmonary Tuberculosis) | 55 | .. | .. | 2 | 11 | 42 | .. | 17 | 12 | 15 | 11 | .. |
| Other Tubercular Diseases | 17 | 4 | 1 | 4 | 2 | 6 | .. | 5 | 5 | 3 | 4 | 1 |
| Cancer, Malignant Disease | 33 | .. | .. | .. | .. | 27 | 6 | 7 | 8 | 11 | 7 | 2 |
| Bronchitis | 63 | 15 | 2 | .. | .. | 14 | 32 | 15 | 24 | 10 | 14 | .. |
| Pneumonia | 83 | 15 | 17 | 3 | 4 | 33 | 11 | 26 | 22 | 19 | 16 | .. |
| Pleurisy | 3 | .. | .. | 1 | 1 | 1 | .. | .. | 1 | 2 | .. | .. |
| Other Diseases of Respiratory Organs | 7 | .. | 1 | 1 | .. | 4 | 1 | 1 | 3 | 2 | 1 | .. |
| Alcoholism and Cirrhosis of Liver | 14 | .. | .. | .. | .. | 13 | 1 | 5 | 3 | 5 | 1 | 1 |
| Premature Birth | 17 | 17 | .. | .. | .. | .. | .. | 4 | 7 | 4 | 2 | .. |
| Diseases & Accidents of Parturition | 5 | .. | .. | .. | .. | 5 | .. | 1 | 2 | 1 | 1 | .. |
| Heart Diseases | 46 | .. | 1 | 1 | 3 | 28 | 13 | 8 | 11 | 13 | 14 | 2 |
| Accidents | 9 | 1 | 1 | 1 | .. | 5 | 1 | 2 | 3 | 3 | 1 | 4 |
| Suicides | 2 | .. | .. | .. | .. | 2 | .. | .. | .. | 2 | .. | .. |
| All other Causes | 240 | 61 | 11 | 7 | 8 | 78 | 75 | 60 | 72 | 65 | 43 | 7 |
| ALL CAUSES | 699 | 149 | 70 | 22 | 33 | 276 | 149 | 179 | 194 | 193 | 135 | 18 |

## TABLE V.

## COMPARISON OF PREVALENCE OF SICKNESS AND DEATH FROM INFECTIOUS DISEASES.

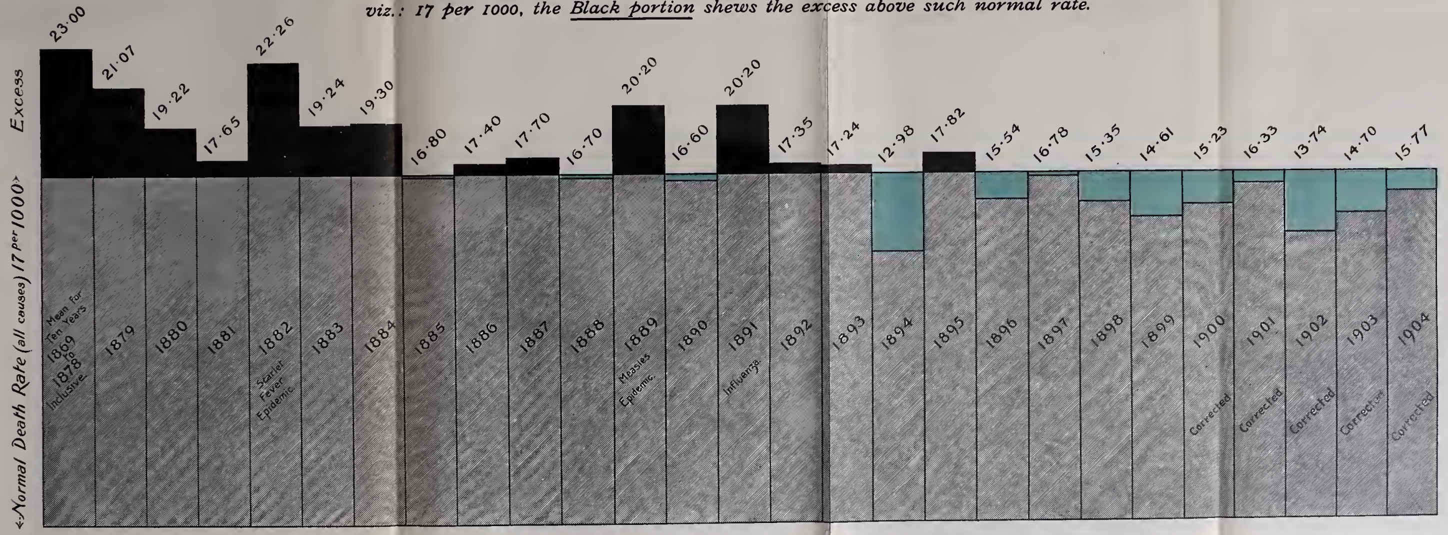
| YEAR. | SMALLPOX | | ERYSIPELAS | | DIPHTHERIA. | | MEMBRANOUS CROUP. | | SCARLET FEVER. | | ENTERIC FEVER | | PUERPERAL FEVER. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Cases reported | Deaths | Cases reported | Deaths | Cases reported | Deaths | Cases reported | Deaths | Cases reported | Deaths | Cases reported | Deaths | Cases reported | Deaths |
| 1891 | .. | .. | .. | 2 | 21 | 2 | .. | 10 | 80 | 6 | 22 | 9 | .. | .. |
| 1892 | .. | .. | .. | .. | 88 | 19 | .. | 4 | 46 | 2 | 23 | 7 | 2 | 2 |
| 1893 | 6 | .. | .. | 1 | 29 | 4 | .. | 3 | 34 | 1 | 52 | 6 | 4 | 2 |
| 1894 | 2 | 1 | .. | 2 | 37 | 3 | .. | 7 | 127 | 2 | 23 | 3 | .. | .. |
| 1895 | .. | .. | .. | 4 | 31 | 6 | .. | 11 | 163 | 9 | 178 | 13 | 1 | .. |
| 1896 | .. | .. | .. | 3 | 40 | 2 | .. | 10 | 177 | 8 | 54 | 10 | 4 | 4 |
| 1897 | .. | .. | .. | 4 | 32 | 6 | .. | 9 | 328 | 9 | 48 | 5 | 5 | 4 |
| 1898 | .. | .. | .. | 3 | 38 | 7 | .. | 3 | 287 | 11 | 52 | 13 | 4 | 2 |
| 1899 | 1 | .. | .. | .. | 27 | 6 | .. | 10 | 398 | 10 | 35 | 4 | 2 | .. |
| 1900 | .. | .. | .. | 1 | 21 | 6 | .. | 4 | 218 | 4 | 33 | 7 | 1 | 2 |
| 1901 | .. | .. | .. | 2 | 13 | 3 | .. | .. | 154 | 9 | 25 | 8 | 2 | 2 |
| 1902 | 4 | .. | .. | 2 | 27 | 6 | .. | .. | 115 | 4 | 35 | 6 | 5 | 4 |
| 1903 | 43 | 1 | 6 | 3 | 27 | 4 | 2 | .. | 275 | 21 | 24 | 8 | 2 | 1 |
| 1904 | 4 | .. | 25 | 1 | 13 | 2 | 1 | .. | 157 | 6 | 30 | 7 | 4 | 1 |

# BOROUGH OF ACCRINGTON.

## *Diagram shewing Death Rate for Twenty-Six Years, 1879 to 1904 inclusive.*

### REFERENCE.

*The Shaded portion of each column represents what the late Dr. Farr considered might be regarded as the Normal Annual Death Rate of a healthy Town, viz.: 17 per 1000, the Black portion shews the excess above such normal rate.*



**CORRECTED** means:—The addition of Deaths of Accrington "residents" in Workhouse and other districts; and the subtraction of Deaths of "non-residents" occurring in the Borough, the result of which means the nett addition of

29 in 1900.
17 „ 1901.
22 „ 1902.
19 „ 1903.
32 „ 1904.

## BOROUGH OF ACCRINGTON SANITARY DISTRICT.

# *Deaths of Accrington Residents from all Causes during 1904.*

Borough, 647. Victoria Hospital, 18. Accrington Residents at Pike Law, 33. Total = 699.
Non-residents in Hospital, 5 = 13. Other " " (see page 11), 6 = 39.

| Diseases. | Total. | Ages in Years. | | | | | | | | | | | | | | | | | | | North West Ward. | | South West Ward. | | North East Ward. | | South East Ward. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 to 1 | 1 to 2 | 2 to 3 | 3 to 4 | 4 to 5 | 5 to 10 | 10 to 15 | 15 to 20 | 20 to 25 | 25 to 30 | 30 to 35 | 35 to 40 | 40 to 45 | 45 to 50 | 50 to 55 | 55 to 65 | 65 to 70 | 70 to 80 | 80 and upw'd | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | M | F | M | F | M | F | M | F |
| **General Diseases.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measles | 25 | 4 | 16 | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 4 | 3 | 3 | 4 | 7 | 3 |
| Scarlet Fever | 6 | .. | 2 | .. | 2 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. | .. | 2 | .. |
| Influenza | 15 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | 1 | .. | .. | .. | 1 | 3 | 2 | 5 | .. | 3 | 1 | .. | 1 | 2 | 7 | .. | 1 |
| Whooping Cough | 14 | 5 | 4 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | 1 | 2 | 3 | 2 | 2 | .. |
| Diphtheria | 2 | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. |
| Enteric Fever | 7 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | 2 | 2 | .. | .. | .. | .. | 2 | .. | 1 | 1 | .. | 3 | .. | .. |
| Zymotic Enteritis | 10 | 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 3 | .. | 1 | 4 | 1 | .. |
| Diarrhœa | 6 | 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | 3 | 1 | .. | .. |
| Syphilis | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Puerperal Septicæmia | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Septic Pneumonia | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| Septic Peritonitis | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Erysipelas | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Septicæmia | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Other Septic Diseases | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Tuberculosis of Lungs | 55 | .. | .. | .. | .. | .. | .. | 2 | 8 | 3 | 5 | 10 | 4 | 5 | 7 | 6 | 5 | .. | .. | .. | 11 | 6 | 8 | 4 | 8 | 7 | 7 | 4 |
| ,, Meninges | 3 | 2 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. |
| ,, Peritoneum | 6 | 2 | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | 2 | .. | 2 | .. |
| ,, Larynx | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. |
| Lupus | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. |
| General Tuberculosis | 4 | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. | .. | 1 |
| Alcoholism; Delirium Tremens | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. |
| Alcoholic Peripheral Neuritis | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| Ptomaine Poisoning | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| Rheumatic Fever | 4 | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 2 | .. |
| Malignant Disease | 33 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 5 | 5 | 5 | 10 | 2 | 3 | 1 | 1 | 6 | 5 | 3 | 3 | 8 | 3 | 4 |
| Rachitis | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Anæmia | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Diabetes Mellitus | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | .. |
| Premature Birth | 17 | 17 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 2 | 1 | 6 | 4 | .. | 2 | .. |
| Congenital Defects | 18 | 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 | 2 | 3 | 2 | 4 | 1 | 1 | 1 |
| Atelectasis | 2 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. |
| Want of Breast Milk | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Marasmus: Malnutrition | 12 | 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 | 1 | 2 | .. | 1 | .. | 1 | .. |
| Dentition | 12 | 8 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | 1 | 1 | 2 | 1 | 2 | 1 |
| Old Age | 31 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 12 | 18 | 2 | 2 | 6 | 9 | 2 | 1 | 4 | 5 |
| **Diseases of Nervous System.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acute Simple Meningitis | 4 | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | 2 | .. | .. | .. | .. |
| Spinal Meningitis | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Softening of Brain | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| General Paralysis | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Infantile Paralysis | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Epilepsy | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| Convulsions | 5 | 4 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | 1 | .. | .. | .. | 1 |
| Diseases of Spinal Cord | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 |
| Abscess of Brain | 2 | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. |
| Cerebral Tumour | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Other Diseases of Nervous System | 4 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | 1 | .. | .. | .. | .. | 1 | 1 | 2 | .. | .. |
| **Diseases of Organs of Special Sense.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Otitis, Mastoid Disease | 2 | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. |
| **Diseases of Heart.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Valvular | 13 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | .. | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 4 |
| Dilatation | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| Fatty Degeneration | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 2 | .. | 1 | .. | .. | .. | .. | 2 | .. | .. |
| Heart Disease (not defined) | 29 | .. | 1 | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 2 | 1 | 2 | .. | 3 | 8 | 4 | 4 | .. | 2 | 2 | 3 | 6 | 3 | 4 | 4 | 5 |
| **Diseases of Blood Vessels.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cerebral Hæmorrhage | 55 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 9 | 18 | 10 | 14 | 2 | 8 | 2 | 4 | 12 | 7 | 9 | 7 | 6 |
| Senile Gangrene | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. |
| Embolism | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| **Diseases of Respiratory Organs.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Laryngitis | 2 | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. |
| Acute Bronchitis | 26 | 11 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 3 | 7 | 1 | 2 | 2 | 6 | 4 | .. | 5 | 2 | 5 |
| Chronic Bronchitis | 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 2 | 4 | 5 | 8 | .. | .. | 4 | 2 | 4 | 4 | .. | 1 | 5 |
| Bronchitis (not specified) | 17 | 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 4 | 2 | 6 | .. | 3 | 4 | 2 | 6 | .. | 1 | .. | 1 |
| Lobar Croupous Pneumonia | 27 | 1 | .. | .. | .. | .. | .. | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 3 | 1 | 8 | 2 | 2 | 1 | 6 | 3 | 6 | 2 | 2 | 3 | 4 | 1 |
| Lobular Broncho Pneumonia | 34 | 14 | 10 | 4 | 1 | .. | 2 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | 1 | .. | .. | 4 | 3 | 2 | 9 | 7 | 2 | 4 | 3 |
| Acute Pneumonia | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | 2 | .. | .. | .. |
| Pneumonia (not specified) | 19 | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | 1 | 1 | 2 | 3 | 3 | 2 | .. | 1 | 2 | 1 | 4 | 5 | 2 | 1 | 1 | 2 | 2 | 2 |
| Asthma | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | 1 |
| Pleurisy | 3 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. |
| Other Diseases Respiratory Organs | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | 2 | .. | .. | .. | .. |
| **Diseases of Digestive System.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gastric Ulcer | 3 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. |
| Stomach; Other Diseases of | 4 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | 2 | .. | 1 | 1 | .. | .. | .. |
| Enteritis | 14 | 12 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 6 | 2 | .. | 1 | 1 | 1 | .. |
| Gastritis | 2 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. |
| Appendicitis | 3 | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | 1 | .. | .. |
| Hernia | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Intestinal Obstruction | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Intussusception of Bowel | 2 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. |
| Cirrhosis of Liver | 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 3 | 1 | .. | 5 | 1 | .. | .. | 2 | 1 | 1 | 1 | 3 | 1 | 1 | .. |
| Liver; other Diseases of | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. | .. | .. | .. |
| Digestive System; other Diseases of | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| **Lymph, &c., Diseases.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen Disease | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | .. |
| Thyroid Body Disease | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Supra Renal Capsules Disease | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. |
| **Diseases of Urinary System.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephritis | 3 | 2 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | 1 | .. |
| Chronic Brights Disease | 17 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | 1 | 1 | 1 | 2 | 1 | 6 | 3 | .. | .. | 2 | 1 | 4 | .. | 2 | 5 | 2 | 1 |
| Calculus | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Bladder and Prostate Disease | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 1 | .. | .. | 2 | .. | 1 | .. | .. | .. |
| Urinary System; other Diseases of | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | 1 | .. | .. | .. | .. | .. | 1 | .. |
| **Diseases of Generative System.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ovarian Tumour | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Uterus; other Diseases of | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | .. |
| **Accidents of Childbirth.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accidents of Parturition | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 |
| Puerperal Peritonitis | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Other accidents of Preg. & Childbirth | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 2 | .. | .. | .. | .. |
| **Joint Disease.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Osteo Myelitis | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. |
| **Ulceration.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Causes of | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| **Accidents and Negligence.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Burns | 1 | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Fracture of Skull, &c. | 3 | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 2 | .. | .. | .. | 1 | .. |
| ,, Thigh | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | .. | 1 | .. | .. | .. |
| ,, Ribs | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| Suffocation (Over-laying) | 1 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| Other Injuries | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. |
| **Suicides.** | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hanging | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. |
| Drowning | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. |
| **Manslaughter** | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. |
| **Murder** | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | .. | .. | 1 | .. | .. | .. | .. | .. | .. |
| **Ill-defined.** | 15 | 4 | 1 | .. | .. | .. | .. | .. | .. | 1 | .. | 1 | .. | 1 | 1 | 3 | 1 | 1 | .. | 1 | 3 | .. | 4 | .. | 3 | 3 | .. | 2 |
| | 699 | 149 | 44 | 13 | 8 | 5 | 12 | 10 | 19 | 14 | 21 | 26 | 22 | 31 | 39 | 48 | 89 | 43 | 77 | 29 | 99 | 80 | 92 | 102 | 93 | 100 | 71 | 62 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | | | | | | | | |